



Request for City Council Committee Action from the Department of Public Works

Date: March 18, 2014

To: Honorable Kevin Reich, Chair Transportation & Public Works Committee

Subject: Enter Lease Agreement with TOMCO2 Systems

Recommendation:

Authorize the proper City officials to enter into a lease agreement with TOMCO2 Systems for renting a carbon dioxide pilot unit substantially in the form in the attached petition #_____. The estimated cost based on the terms of the agreement and the maximum duration of ten months is \$24,500. The amount is within the project budget (07400-9010950-CWTR231426) and no additional appropriation is required.

Previous Directives:

- N/A

Department Information:

Prepared by: Li Zhang, P.E., Professional Engineer, Public Works - Water

Approved by: _____

Steven A. Kotke, P.E., Director of Public Works

Presenters in Committee: Li Zhang, P.E., Professional Engineer, Public Works - Water

Reviews

- Permanent Review Committee (PRC): Approval _____ Date _____
- Civil Rights Approval Approval _____ Date _____
- Policy Review Group (PRG): Approval _____ Date _____

Financial Impact *(delete all lines not applicable to your request)*

- No financial impact

Community Impact

- Neighborhood Notification
- City Goals: Maintain the physical infrastructure to ensure a healthy, vital and safe city
- Comprehensive Plan
- Zoning Code
- Other

Supporting Information

The Softening Plant is the first treatment process after raw water is drawn from the Mississippi River. In this plant, the water is "softened," meaning that minerals are removed from the water. The softening process is a valuable part of the overall drinking water treatment process, since approximately half of the natural organic matter, from vegetation like fallen leaves, is removed in this plant. The organic matter comes from vegetation like fallen leaves. Removing the organic matter helps reduce odors and reduces the potential for disinfection byproducts.

Recarbonation is the last step in the softening plant. It adds carbon dioxide to the water, bringing it nearer to neutral pH for the next stages in the treatment process. The existing system was installed between 1947 and 1951. Some parts of the system were replaced about approximately 20 years ago.

The Water Division is currently investigating alternatives for current technologies, including liquid solution systems to that would replace the carbon dioxide feed system. TOMCO2 Systems is one of the two carbon dioxide liquid solution systems manufactures on the market. The proposed TOMCO2 pilot system will test this equipment technology type so that we can compare the results and efficiency to other alternatives.

Upgrading recarbonation system at Fridley Softening Plant is listed in the Water Priority Improvements Plan. It has been accepted by Capital Long-Range Improvement Committee, and is in the 5-year Capital Improvement Plan for Public Works (WTR26).

Key terms for the agreement include:

1. City of Minneapolis agrees to pay TOMCO2 Systems the actual cost of repair for any damage to the unit which may occur during piloting not the result of faulty or defective equipment. In the event that the pilot unit is damaged beyond repair, City of Minneapolis agrees to pay to TOMCO2 Systems the full replacement value of the pilot unit. TOMCO2 System estimated the full replacement value of the pilot unit not to exceed \$40,000. The cost for repair or replacement will be covered by City of Minneapolis's self-insurance program.
2. Pursuant to the proposed paragraph 14, City of Minneapolis is responsible for safe use of carbon dioxide. As carbon dioxide is used for the existing feed system, Minneapolis Water Operations Group is familiar with storing and handling carbon dioxide. Minneapolis Water has trained our staff on safety procedures related to use of carbon dioxide.
3. TOMCO2 Systems does not have staff available to run the pilot for an extended period of time for Minneapolis Water. Minneapolis Water Operations Group will be operating the pilot unit. To ensure proper operation of the unit, on-site training by TOMCO2 Systems technician will be provided to our Operations Group and standard operating procedures will be developed for operating the pilot unit.

Pursuant to the proposed paragraph 14, City of Minneapolis is accepting strict product liability in tort and City of Minneapolis is responsible for safe operations of the unit. Most important strict product liability in tort related to this pilot includes potential contamination of our process water and potential property or employee damages.

The materials and components used that are in contact with the process water for the TOMCO2 Systems pilot are NSF-61 Certified materials and proper for potable water use purpose. Cleaning-in-place procedure will be conducted to clean the pilot panel before starting up the unit. Moreover, the equipment is specifically designed for use in drinking water systems in the manner being planned. The possibility of contaminating our process water by running the pilot unit is negligible.

If any property or employee damage occurs during piloting, TOMCO2 Systems is only responsible for damages to the extent said damages are caused by TOMCO2 Systems' negligence, gross negligence, or willful misconduct. City of Minneapolis will be responsible for damages caused by improper operation of the unit.

4. The total upfront cost for the TOMCO2 pilot system including shipping cost, starting up the TOMCO2 equipment and training fee is \$9,500. The monthly rental fee is \$1,500. The targeted start date of the pilot is April 1, 2014. The pilot will run for duration of minimum of two months to maximum of ten months. The total cost for the TOMCO2 pilot is in the range of \$12,500 to \$24,500.

CC: Pamela Fernandez, Contract Management